User Manual

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Box / Big Bag Turner

Machine nr.: ……

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Preface

This user manual is written for anyone working on or with the machine. Before working on or with the machine, first read this manual.

This user manual contains important instructions / information on how to use the machine in a safe, professional and economical way and must always be available where the machine is used.

In addition to this user manual, the mandatory rules and regulations for accident prevention and environmental protection in the country and place of use of the machine must also be observed.

This user manual contains information on the operation of the machine with all the possible options. Use only the information that applies to your machine. Depending on the intensity of use and customer requirements, this machine can be equipped with various options. Contact your sales consultant.

Supplier details if not directly supplied by Javo BV. Dealer stamp:

Javo BV is not responsible for any errors in this manual or the consequences thereof.

Javo BV is not liable for damage or consequential damage caused by operating errors, lack of expert maintenance and any use other than described in this manual.

The liability of Javo BV also expires once modifications or additions are made without written permission of Javo BV.

This machine is suitable for process and environmental conditions as stated in section "Specifications and Tolerances" of this manual. Any other use is not authorized by Javo BV and this allows the operator and / or its environment at risk.

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1 Technical specifications and tolerances

This machine is intended to be used for emptying big bags and boxes into a JAvo Pot Machine only. This machine is meant for processing substrate and other materials that are described in this manual only. Detailed operation of the machine is described in section "Operation".

This machine may be used only within the limits for specifications and tolerances of the order, on the assembly drawing and indicated in this manual. If the machine is used outside these specifications, Javo BV cannot take responsibility for this machine.

This machine is intended for products as agreed in the order confirmation only. To ensure the proper operation of this machine, only products with specifications and tolerances as specified in the order may be used.

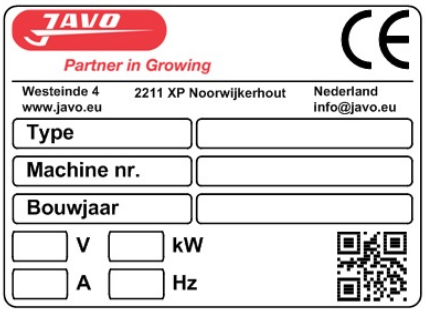
Do not use the machine for purposes other than the intended purpose of Javo BV. This can lead to damage and danger to the operator and its environment.

This machine is CE marked. When placing multiple machines in one line, the entire line must be properly CE marked before using this machine. Until proper CE Marking of the line is carried out, commissioning of this machine is prohibited.

Specifications	
Voltage	400Volt 50Hz 3~+N+ PE
Machine connection	16A 5pole
Power consumption	1,1 kW
Weight	± 470 kg
Length x width x height	1900 x 1600 x 1800 mm
Year of construction	See type plate
Type product	As agreed in the order confirmation.

1.1 Type plate

The type plate is placed onto the main cabinet door.



2 Safety

This machine is built according the state of the art technique and the accredited safety regulations. Despite this, the body and life from the user or third parties can be in danger when using it. There could also arise damage to the machine or other goods when using it.

This machine is CE marked. When placing multiple machines in one line, the entire line must be properly CE marked before using this machine. Until proper CE Marking of the line is carried out, commissioning of this machine is prohibited.

2.1 Provisions

1. Operation and maintenance of this machine must be performed by qualified personnel in compliance with warnings on the machine and in accordance with the user manual. Keep children and other (unauthorized) persons away while using machine.
2. This machine is suitable for process and environmental conditions as stated in section "Specifications and Tolerances" of this manual only. Any other use is not authorized by Javo BV and this allows the operator and / or the environment at risk.
3. It is prohibited to modify this machine, without prior written approval of Javo BV.
4. Thermal fuses and torque limiters may not be set different upon delivery of the new machine. The thermal circuit breakers should never be used to turn on / off the machine.
5. This machine should be installed so that there is sufficient space remaining for providing safe instructions and / or performing maintenance and / or inspections. Put the brakes on the castors before the machine is turned on.
6. Keep the work area clean and well lit. Cluttered or dark areas invite accidents.
7. This machine is not suitable to be used outside. Electrical components are only splash proof. Keep the machine away from rain and moisture. When using the machine in a humid environment is unavoidable, you should use an RCD.
8. Keep hands, hair, loose clothing and / or jewellery away from moving parts of the machine. Wear appropriate clothing without loose parts. Wear non-slip work shoes.
9. As long as the machine is on, no connection or safety devices may be removed. The machine may only be used when all protective devices and safety-related facilities are available and ready for use.
10. Do not stand on the machine when it is operating.
11. Never move the machine if the power cable and / or pneumatic supply is still connected.
12. Prescribed checks and maintenance in the user manual must be observed.
13. Allow the machine to be serviced and repaired by qualified personnel only with original replacement parts.
14. In addition to the user manual, generally applicable statutory and other regulations regarding accident prevention and environmental protection have to be respected. This is also referred to handling of personal protective equipment.
15. Inform operating personnel before start maintenance. Interrupt if possible the power (mains), before start machine investigation or maintenance by turning off the main switch and locking the main switch. Pull the plug from the wall socket.
    a. As work must be done with power supply (mains) voltage on the machine, then arrange an additional person who can operate the emergency stop.
16. When a machine part is damaged or not working in the prescribed manner, the work must be interrupted immediately. Resumption allowed only when the machine part is repaired or replaced and checked. Consult your dealer if the machine is not functioning properly.
17. Machine and / or parts must be disposed in accordance with local laws and regulations.

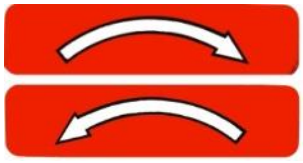
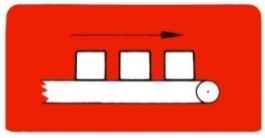
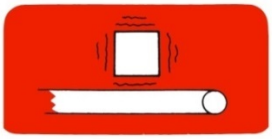
2.2 Safety devices on the machine

Caps and doors are screening moving parts. Always place back caps and close doors before the machine is turned on. Caps and doors should remain closed while operating the machine.

The motors of the machine are protected against overload by thermal switches. These switches are located in the control box.

2.3 Explanation of icons and symbols

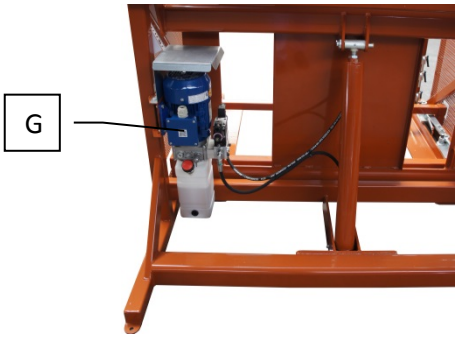
Pictogram	Meaning
	Read and understand this manual before using the machine and / or performing maintenance.
	Remove Power (mains).
	Wear during all work on or with the machine safety shoes and safety glasses.
	Wear during cleaning and maintenance work on this machine also safety gloves and protective clothing.
	Warning. Important points and / or instructions regarding safety and / or injury prevention are marked with this warning sign.
	Dangerous electrical voltage. Dangerous electrical voltage present.
	Risk of crushing. Danger of moving or rotating parts.
	It is forbidden to wear Loose clothing, long hair and / or jewelry nearby moving parts of the machine.
	Trespassing.
	Do not rinse control cabinet Danger of moisture in the cabinet when it is rinsed with water.

Symbols that may be present on this machine			
Drill 	Direction of movement 	Speed ground feeder (curved) 	Speed ground feeder (straight)
Speed pot belt (curved) 	Speed pot belt (straight) 	Brush disc Rotofill 	Tray belt Rotofill 
Rotor Rotofill 			

3 Description of the machine

3.1 Machine overview

A. Space for box or big bag
B. Lock for big bag
C. HMI
D. pallet clamping mechanism
E. safety fence
F. Slop place
G. Hydraulic unit



3.2 Options

Depending on the intensity of use and customer requirements, this machine can be equipped with various options. Contact your sales consultant.

Options	Code	Specifications
4 meter 5x1.5 cable incl. 16A plug	900965	

Various hoppers for the purpose of potting machines available (different type for every machine).

3.3 Operation

The process of the machine starts with a box or big bag filled with substrate. The box or bag is placed onto the turner with a pallet. The big bag is fastened with the loops on the big bag. The turner pushes the box or big bag full of substrate upwards with the aid of a hydraulic cylinder. When the turner is in highest position, the box full of substrate will tilt over.

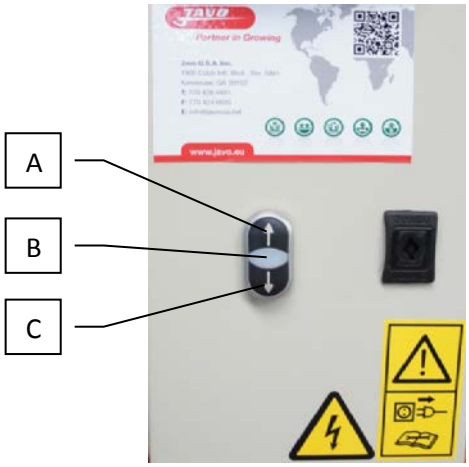
3.4 Machine workstations

This machine has an operator place at the HMI for tilting a box or big bag.

3.5 Controls

The motor is controlled via the control panel. The control panel consists of the following buttons:

A. Button move up
B. White LED
C. Button move down



4 Transport

Follow all instructions described in this manual, in particular chapter safety.

On delivery of the machine, a Javo mechanical engineer must be present to unload the machine from the (freight) wagon.

The machine can be attached to the bottom.

Prior to moving the machine, the power and hydraulics should be disconnected. Make sure the cables are stowed sufficiently.

If the machine needs to be moved:

1. Ensure that the distance to be covered is free, so the machine without any obstacles can be moved to the desired position.
2. Place the pipes (A) in the machine.
3. Lift the machine with a pallet truck.

The relative humidity should not be too high so that water condenses in the machine.

Report damage during or immediately after delivery to the transport company and to Javo BV. Take all necessary steps to prevent further damage.

5 Mounting, installation and commissioning

Follow all instructions described in this manual, in particular chapter safety.

This machine is CE marked. When placing multiple machines in one line, the entire line must be properly CE marked before using this machine. Up to CE Marking of the line, commissioning of this machine is prohibited.

5.1 Placement

The machine must be placed on a flat surface, with sufficient weight capacity. Install the machine so that there is enough space left for service providing, safe instructions and / or cleaning, maintenance and / or inspections. The machine can be attached to the bottom.

This machine is not suitable to be used in the open air. Electrical components are only splash proof. Keep the machine away from rain and moisture. When using the machine in a humid location is unavoidable, you should use an RCD.

5.2 Facilities to take care of by the user

Prior to delivery of the machine, the required materials and facilities (power, etc.) needs to be present within 3 meters of machine.

Required power supply: 400 Volt, 3 Phase + Neutral + Earth. (N. America: 208/220V 60Hz.).

5.3 Mounting / Connecting

If applicable, the components supplied are to be mounted on the machine. Make sure that the moving parts are free. If the machine is complete, it can be connected (by a competent person) to the power supply.

Keep hands, hair, loose clothing and / or jewellery away from moving parts of the machine. Wear appropriate clothing without loose parts. Wear non-slip work shoes.

As long as the machine is on, no connection or safety devices may be removed. The machine may only be used when all protective devices and safety-related facilities are available and ready for use.

5.4 Check motor rotation direction

Check the rotation direction of the motor before you start working with the machine.

Procedure:

1. Connect the power cable.
2. Start the motor.
    a. Turn on the main switch.
    b. Start the motor with the motor up or down button.
3. Check the direction of rotation of the motor.
    a. The desired direction of rotation shown in the picture.
4. Stop the motor
5. Turn the main switch off.
6. When rotation direction is incorrect:
    a. Remove the plug from the socket.
    b. Open the plug and switch 2 of the 3 phases in the plug. This should only be carried out by suitably qualified personnel.

6 Operation

Follow all instructions described in this manual, in particular chapter safety.

Keep hands, hair, loose clothing and / or jewellery away from moving parts of the machine. Wear appropriate clothing without loose parts. Wear non-slip work shoes.

As long as the machine is on, no connection or safety devices may be removed. The machine may only be used when all protective devices and safety-related facilities are available and ready for use.

If a machine part is damaged or not working in the prescribed manner, work must be interrupted immediately. Resumption allowed only when the machine part is repaired or replaced and checked. Consult your dealer if the machine is not functioning properly.

6.1 Adjustment with a box

The turner must be adjusted so that it is impossible for a box to fall out.

procedure:

1. In the tray of the turner a tube (A) is mounted, and two short pipes (B).
2. Drive the box in the turner and put it on the floor.
3. Remove the pallet truck / forklift truck etc.
4. The two short tubes, and a long pipe must now be adjusted for height.
    a. Loosen the four bolts on each side of the rods completely so that the long tube and the short tubes are loosened.
    b. The long tube and the short tubes must be above the edge of the box as close as possible.
        i. Note that the pallet truck still needs to be able to ride in the machine.
    c. Tighten the bolts firmly. The box can now be tilted.

6.2 Adjustment with a big bag

The turner must be adjusted so that it is impossible for a big bag to fall out.

Procedure:

1. Put a big bag in the turner and put it on the floor.
2. Hooks are attached on the 4 sides of the turner (on the front, movable hooks are attached and at the rear, hooks are welded to the machine).

6.3 Start

The machine can be started in one way only:

1. Insert the five-pole 16 amp plug into the socket.
    a. The white button lights up.
    b. The turner is now ready for operation.
2. When operating the arrow button up the turner goes up.
3. When operating the arrow button down the turner goes down.

6.4 Stop

Stop procedure:

1. Release the control button.

7 Maintenance

Follow all instructions described in this manual, in particular chapter safety.

Maintenance of this machine must be performed in compliance with warnings on the machine and in accordance with the user manual by qualified personnel.

Keep hands, hair, loose clothing and / or jewellery away from moving parts of the machine. Wear appropriate clothing without loose parts. Wear non-slip work shoes.

As long as the machine is on, no connection or safety devices may be removed. The machine may only be used when all protective devices and safety-related facilities are available and ready for use.

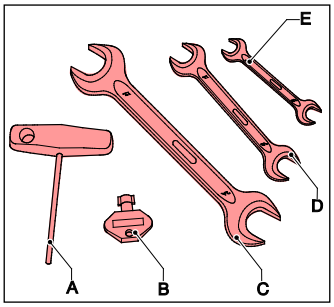
Always unplug the plug from the socket before starting maintenance. Wear personal protective equipment (see section 2.3).

Inform operating personnel before start maintenance. Interrupt if possible the power (mains), before the machine is investigated or maintained by turning off the main switch and locking it and pull the plug from the socket. If work must be done with power supply (mains) voltage on the machine, work with an additional person who can operate the emergency stop.

7.1 Required tools and equipment

A set of keys is included with the machine, consisting of:

A. Allan key 4 mm
B. Door key
C. Spanner 24-27mm
D. Spanner 17-19mm
E. Spanner 10-13mm



7.2 Preventive Maintenance

For the following maintenance instructions normal use is considered. With heavy use, or use under extreme conditions, maintenance should be performed at shorter intervals.

Item	1x per...	Comments
Machine	Day	Check if moving parts are functioning correctly and not clamping and / or parts are broken or damaged in such a way that the operation is adversely affected. Have damaged parts repaired before use.
Height of tubes in box turner	Day	Before each use, check if the height of the tubes is adjusted.
Hydraulic unit	Day	Check if there is enough oil present in the reservoir.
Pictograms	Week	Check readability and replace if necessary.
Bearings	320 hours	Grease fittings with a grease gun with 1 to 2 strokes of grease.
Electrical installation	Year	Check for damage.
Electric motors	Year	Remove dust.

7.3 Fault list

Problem	Possible cause	Action / Solution
Motor fault	mains voltage deviates more than 10% of the rated motor voltage	Provide the correct voltage
	Too high cooling air temperature	Provide cool air
	Poor cable connection	check the cable connection and repair if necessary
	Blown fuse	Replace fuse
	Too little cooling air caused by a clogged cooling air passage	Ensure proper inlet and outlet of the cooling air
The motor hums and takes too much power	Defect winding	Repair or replace the motor winding
Thermal fuses are falling out	Motor defect	Call a mechanic
	Mechanical blockage of elevator	Remove blockages
	Motor is connected incorrectly	Connect the motor correct
Hydraulic cylinder does not go up	Poor cable connection to the electro motor	Check and repair the cable connection if necessary
	Too little oil in the reservoir	Refill oil and check for leakage
	Motor moves into the incorrect direction	Turn phase 1 and 3 around

7.4 Drawings and schemes

The drawings accompanying this machine are supplied in a separate file. The wiring diagrams are included in the electrical cabinet of the machine.

7.5 Spare parts

Only original spare parts and accessories of Javo BV may be used on the machine.

Javo BV advises you to take certain parts in stock because of wear sensitivity and / or any expected downtime for re-ordering of the parts.

The spare parts list can be found on the assembly drawings. These can be found on JavoNet.

When ordering (spare) parts at Javo BV, the following information must be included: drawing number, item number, desired length (if applicable) and the desired number of pieces.

7.6 JavoNet

We recommend you to register your machine on JavoNet. This way you get online access to all technical drawings and documents pertaining to your machine.
Visit our website (www.javo.eu) for more information and to request an account.

JavoNet

7.7 Customer support and advice

Our technical department will answer your other questions about repair and maintenance of your machine and spare parts. We can help you with any questions regarding the purchase, use and settings of products and accessories.

8 Disposal of machine or machine parts

Follow all instructions described in this manual, in particular chapter safety.

Perform the following steps when disposing the machine:

1. Decommission the machine and remove electric and pneumatic power.
2. Drain and remove all consumables.
3. Scrap the machine according to the local legislation.

9 EG-conformity statement

EG-conformity statement for machines (directive 2006/42/EG, annex II, under A.)

CE

Javo BV
Westeinde 4
2211XP Noordwijkerhout
The Netherlands

Declares that:

Machine: ***Box / Big Bag Turner***
Type: ***Substrate system***

is in accordance with the **Machine directive 2006/42/EG** and complies with the provisions of the **EMC-directive 2004/108/EEG**

Complies with the harmonized European Standards:

Harmonized European standard	definition	Harmonized European standard	definition
NEN-EN-ISO 12100:2010	Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology	NPR-ISO/TR 14121-2:2010	Safety of machinery - Risk assessment - Part 2: Practical guidance and examples of methods
NEN-EN-IEC 60204-1	Safety of machinery - Electrical equipment of machines - Part 1: General requirements		

The Netherlands, Noordwijkerhout,
March 2015

Cees Bouwmeester
Director